

REMARKS

Applicant thanks for the Examiner for the detailed explanation concerning the basis of the rejections of pending claims 1 – 5 and 7 – 26. Applicant believes that the disputed issues have been clarified and may be fully resolved at this time.

Although Applicant maintains that it is improper to combine the Van Ryzin (U.S. Patent No. 5,844,505) and Martino (U.S. Patent No. 6,061,646) references, Applicant herein focuses on an omission from the combination of Van Ryzin and Martino. Namely, the Van Ryzin and Martino references do not individually or in combination teach or suggest translation of a character string.

Because the combination of these two references do not teach or suggest each and every claim limitation in each remaining independent claim as amended on June 24, 2005, there is no *prima facie* case of obviousness. Applicant respectfully requests withdrawal of the Examiner's rejection of claim 1 – 5 and 7 – 23. Claims 24 through 26 have been cancelled.

Examiner contends that "Martino provides a means for changing (replacing, *i.e.* translating) information to reflect a particular user's language on the vehicle navigation text display taught by Van Ryzin . . ." (2/16/06 Office Action at 3-4.) While Martino addresses multiple language issues, it does not disclose a means for changing, replacing, or translating information.

The Examiner's statement "Martino discloses changing information on a display to a language of a particular speaker" is correct if the Examiner is referring to the manner in which visual information on a display may change from one language to another. (2/16/06 Office Action at 3; Martino, Col. 11, Line 15 – Col. 12, Line 5.) However, this is not commensurate with the translation of information from one language to another.

Martino does not teach or suggest that a character string should be translated from one language to another, let alone the translation of a character string obtained through image recognition. Martino teaches a manner of identifying the user's spoken language using multiple dictionaries in different languages. (Martino, Col. 2, lines 38 – 60; Col. 9, line 14 – Col. 10, line 65.) Once a language is determined, a more detailed

dictionary is used solely for the purpose of comprehending the user's utterance. (Martino, Col. 10, line 66 – col. 11, line 7.) A question is deduced from the utterance and a *response* is then provided in the user's language. (Martino, Col. 11, lines 8 – 24.) The providing of an audible or visual *response* in the user's language does not constitute translation of a character string from one language to another.

Martino does not disclose translation in any form. The same information is not presented to the user in a different language. Accordingly, Applicant respectfully submits that the combination of Van Ryzin and Martino fail to present a *prima facie* case of obviousness.

Presently pending independent claims 1, 8, 9, 10, 14, 16, 20, and 21 are copied below. Each independent claim includes an italicized portion, which serves to identify an element that is not found in the combination of the Van Ryzin and Martino references. Below the claims are recitations of relevant portions of the Examiner's rejection and Applicant's explanation why the combination of Van Ryzin and Martino does not teach or suggest the italicized portions. Applicant reserves the right to present other bases for traversal of the Examiner's rejections.

Claim 1

1. A navigation system comprising:
 - speech-recognition means for performing speech-recognition processing on input speech spoken by a speaker;
 - language-determining means for determining a language in which said input speech is spoken based on the contents of said input speech as recognized by said speech-recognition means;
 - navigation-processing means for performing a vehicle-installed-type navigation operation utilizing the language as determined by said language-determining means; and
 - image recognition means for determining the contents of the characters included in an inputted image of a road sign
- wherein said navigation-processing means includes a *guiding means for replacing the characters, whose contents are determined by said image recognition*

means, with other characters having substantially the same meaning in the language determined by said language-determining means, and for displaying characters or outputting speech.

The Examiner asserts that Martino teaches “suppl[ying] requested data to a user on a display in the spoken language.” (2/16/06 Office Action at 5-6) (citing Martino, Col. 11, Lines 15-24.) Claim 1 does not require merely supplying requested data. Claim 1 requires that the characters identified by the image recognition means are replaced with other characters having substantially the same meaning in the language identified by the language-determining means.

Martino teaches receiving a question in a given language and responding to that question through synthesized speech or prerecorded messages. (Martino, Col. 11, Lines 15-24.) Martino fails to teach or suggest translating information procured from an external source, let alone replacing characters procured through image recognition with characters in another language.

Van Ryzin teaches image recognition of road signs and utilization of this information for route guidance. (Van Ryzin, Col. 3, Line 9 – Col. 5, Line 33.) It makes no mention of alternative languages.

At best, the combination of Martino and Van Ryzin would be a system in which road signs are recognized and used by the navigation system for route guidance, and in which the user can separately ask questions and receive responses in multiple languages. Such a combination distinctly lacks any teaching or suggestion of translating the information presented on a road sign into another language.

There is no *prima facie* basis for obviousness of claim 1 based on Martino and Van Ryzin. Applicant respectfully requests that the Examiner withdraw the rejections of independent claim 1 and dependent claims 2, 3, 4, 5, and 7.

Claim 8

8. A navigation system comprising:
a microphone;

a speech-recognition device operable to determine a language of a spoken word, connected with the microphone;

an identity learning unit operable to compute a frequency of languages determined by said speech-recognition device and update contents of an identity database based on a frequency distribution of the languages stored in said identity database;

a disc reading device operable to read map data from a storage medium;

a map reading control unit operable to specify a speaker's language based on the determination result of said identity learning unit, and send said disc-reading device a request for map data corresponding to the specified language of a speaker;

a camera;

an image recognition unit operable to determine a language of a character string included in a road sign captured by said camera;

a navigation processing unit operable to replace the character string captured by the image recognition unit with characters in the speaker's language that have the same meaning; and

a display device operable to display a map image showing a vicinity of a vehicle.

Examiner asserts that Martino teaches the supplying of requested data to a user. (2/16/06 Office Action at 15) (citing Martino, Col. 11, Lines 15-24.) Claim 8 does not require supplying requested data. Claim 8 requires a navigation processing unit that can replace the character string identified by image recognition with characters in the speaker's language that have the same meaning.

For similar reasons as discussed with reference to claim 1, there is no *prima facie* basis for obviousness of claim 8 based on Martino and Van Ryzin. Applicant respectfully requests that the Examiner withdraw the rejection of claim 8.

Claim 9

9. A navigation system comprising:

a microphone;

a speech-recognition device operable to determine a language of a spoken word, connected with the microphone;

an identity learning unit operable to compute a frequency of languages determined by said speech-recognition device and update contents of an identity database based on a frequency distribution of the languages stored in said identity database;

an intersection guiding unit operable to specify a speaker's language based on the determination result of said identity learning unit, generate an intersection guiding image corresponding to the specified language, and cause a speech data generating unit to generate guiding speech data corresponding to the specified language;

an audio unit operable to output the guiding speech data generated by said speech data generating unit;

a camera;

an image recognition unit operable to determine a language of a character string included in a road sign captured by said camera;

a navigation processing unit operable to translate the character string captured by the image recognition unit into the speaker's language; and

a display device operable to display the intersection guiding image generated by said intersection guiding unit.

Examiner asserts that Martino teaches the supplying of requested data to a user. (2/16/06 Office Action at 7) (citing Martino, Col. 11, Lines 15-24.) Claim 9 does not require supplying requested data. Claim 9 requires a navigation processing unit that can translate the character string identified through image recognition into the speaker's language.

For similar reasons as discussed with reference to claim 1, there is no *prima facie* basis for obviousness of claim 9 based on Martino and Van Ryzin. Applicant respectfully requests that the Examiner withdraw the rejection of claim 9.

Claim 10

10. A navigation system comprising:
a microphone;
a speech-recognition device operable to determine a language of a spoken word, connected with the microphone;
an identity learning unit operable to compute a frequency of languages determined by said speech-recognition device and update contents of an identity database based on a frequency distribution of the languages stored in said identity database;
a camera;
an image recognition unit operable to determine a language of a character string included in a road sign captured by said camera;
a guiding sign generating unit, operable to generate a guiding image in a speaker's language, connected with said image recognition device; and
a display device for displaying said guiding image generated by said guiding sign generating unit
wherein the guiding unit replaces the character string captured by the image recognition unit with characters in a user's language that have the same meaning.

Examiner asserts that Martino teaches the supplying of requested data to a user. (2/16/06 Office Action at 9) (citing Martino, Col. 11, Lines 15-24.) Claim 10 does not require supplying requested data. Claim 10 requires a navigation processing unit that can replace the character string identified through image recognition into the speaker's language.

For similar reasons as discussed with reference to claim 1, there is no *prima facie* basis for obviousness of claim 10 based on Martino and Van Ryzin. Applicant respectfully requests that the Examiner withdraw the rejection of independent claim 10 and dependent claims 11, 12 and 13.

Claim 14

14. A navigation system comprising:
a microphone;
a speech-recognition device operable to determine a language of a spoken word, connected with the microphone;
an identity learning unit operable to compute a frequency of languages determined by said speech-recognition device and update contents of an identity database based on a frequency distribution of the languages stored in said identity database;
a disc-reading device operable to read map data from a storage medium;
a map reading control unit operable to specify a speaker's language based on the determination result of the identity learning unit, determine whether map data corresponding to the specified language is not stored in the storage medium, and send said disc reading device a request for reading map data independent of the specified language;
a map buffer operable to store the read map data;
a camera;
an image recognition unit operable to determine a language of a character string included in a road sign captured by said camera; and
a navigation processing unit operable to replace the character string captured by the image recognition unit with characters in the speaker's language that have the same meaning.

Examiner asserts that Martino teaches the supplying of requested data to a user. (2/16/06 Office Action at 16) (citing Martino, Col. 11, Lines 15-24.) Claim 14 does not require supplying requested data. Claim 14 requires a navigation processing unit that can replace the character string identified through image recognition into the speaker's language.

For similar reasons as discussed with reference to claim 1, there is no *prima facie* basis for obviousness of claim 14 based on Martino and Van Ryzin. Applicant

respectfully requests that the Examiner withdraw the rejection of independent claim 14 and dependent claim 15.

Claim 16

16. A map information displaying method in a navigation system comprising the acts of:

- performing speech-recognition processing on input speech;
- determining a language of a speaker of the input speech based on contents of the recognized input speech;
- inputting an image of a road sign;
- determining contents of the characters in the image; and
- translating the contents of the character in the image into the language of the speaker*, and
- displaying map information.

Examiner asserts that Martino teaches supplying requested data to a user. (2/16/06 Office Action at 10) (citing Martino, Col. 11, Lines 15-24.) Claim 16 does not require merely supplying requested data. Claim 16 requires translating the contents of the character in the image into the language of the speaker.

For similar reasons as discussed with reference to claim 1, there is no *prima facie* basis for obviousness of claim 10 based on Martino and Van Ryzin. Applicant respectfully requests that the Examiner withdraw the rejection of independent claim 16 and dependent claims 17, 18 and 19.

Claim 20

20. A route guiding method in a navigation system comprising the acts of:

- searching for a route to a destination;
- performing speech-recognition processing on input speech;
- determining a language of a speaker of the input speech based on the contents of the recognized input speech;

generating guiding speech corresponding to the speaker's determined language;
guiding a vehicle along a route set in the searching step using the guiding speech;
inputting an image of a road sign;
determining the contents of the characters in the image; and
translating the contents of the characters in the image into the language of the speaker.

Examiner asserts that Martino teaches supplying requested data to a user. (2/16/06 Office Action at 11) (citing Martino, Col. 11, Lines 15-24.) Claim 20 does not require supplying requested data. Claim 20 requires translating the contents of the character in the image into the language of the speaker.

For similar reasons as discussed with reference to claim 1, there is no *prima facie* basis for obviousness of claim 20 based on Martino and Van Ryzin. Applicant respectfully requests that the Examiner withdraw the rejection of claim 20.

Claim 21

21. A road guiding method in a navigation system comprising the acts of:
performing speech-recognition processing on input speech;
determining a language of a speaker of the input speech based on the contents of the recognized input speech;
inputting an image of a road sign;
determining the contents of characters contained in said image; and
replacing the characters contained in the image, whose contents have been determined, with other characters in a speaker's determined language having the same meaning.

Examiner asserts that Martino teaches supplying requested data to a user. (2/16/06 Office Action at 12) (citing Martino, Col. 11, Lines 15-24.) Claim 21 does not require supplying requested data. Claim 20 requires replacing the characters

contained in the image, whose contents have been determined, with other characters in a speaker's determined language having the same meaning.

For similar reasons as discussed with reference to claim 1, there is no *prima facie* basis for obviousness of claim 21 based on Martino and Van Ryzin. Applicant respectfully requests that the Examiner withdraw the rejection of claim 21 and dependent claims 22 and 23.

Applicant respectfully submits that the claims as presently pending are in condition for allowance.

Respectfully submitted,



David H. Bluestone
Registration No. 44,542
Attorney for Applicant

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200